

## **Bioefficacy of Cameroonian *Hemizygia welwitschii* Rolfe-Ashby (Lamiaceae) leaf powder against *Callosobruchus maculatus* Fabricius in stored cowpeas seeds**

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This work aims to evaluate the efficacy of Cameroonian *Hemizygia welwitschii* leaf powder against *C. maculatus*. The *H. welwitschii* leaf powder was applied at four different dosages 0.25, 0.5, 1 and 2 g/50g (corresponding to 5, 10, 20 and 40 g/kg) and SilicoSec (positive control) at 0.025, 0.05, 0.075 and 0.1 g/50g of cowpea (corresponding to 0.5, 1, 1.5 and 2 g/kg) and the untreated control (0 g/50g). 20 unsexed adults were introduced into the test jars to evaluate adult mortality and F1 progeny. To assess damage and seed viability, 30 unsexed insects were added to jars treated at the same concentration. Adult's mortality was recorded at 1, 3, 5 and 7 days after treatment (DAT), damage and seed viability were evaluated after three months of storage. All the experiments were arranged in a completely randomized design with four replications. From the results obtained, the highest mortality rate (82.50%) was recorded in jar treated with *H. welwitschii* at 40 g/kg compared to 100% for SilicoSec (2 g/kg) at 7 DAT. Like SilicoSec, *H. welwitschii* significantly ( $P < 0.001$ ) reduced the number of F1 progeny compared to the untreated control. Seed damage was found to decrease with increase in concentration of insecticide within the three months of storage. Germination rate of cowpea seeds treated with the highest dosage (40 g/kg) of *H. welwitschii* powder were 72.50% and for SilicoSec was 87.50% (1.5 g/kg). Our findings show that the leaf powder of *H. welwitschii* is very effective in protecting stored cowpea seeds against *C. maculatus* infestation and could be exploited by farmers.